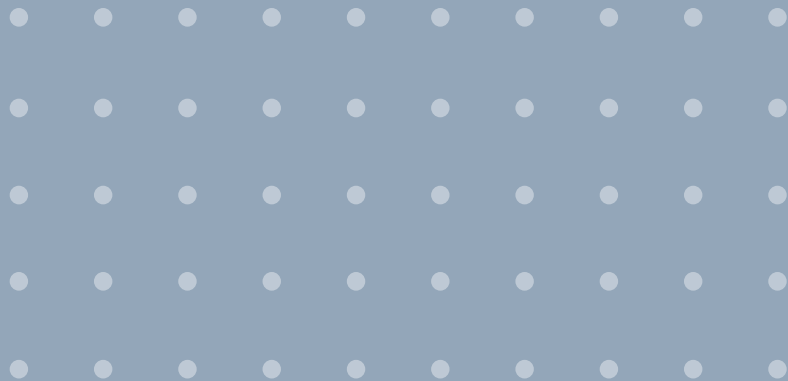




## USE CASE

# IoT Solution for Agriculture: Pumping Up Growth



0

**Travel Time to  
Start Pumps**

100%

**Confidence Your  
Pumps Are  
Running**

0

**Over/Under  
Watering**

## **Overview: Distributed Agricultural Irrigation Pump Monitoring and Operation**

A major agricultural grower was using a pivot irrigation system to run water from a pump station to the fields. In order to monitor these pumps, this grower made routine checks to each station to ensure proper operation and pressure, and perform maintenance. Pump stations are geographically dispersed making routine checks costly in terms of time and resources. Despite routine monitoring, the grower ran the risk of equipment failure between checks. This led to the loss of sensitive crops. The grower came to Elevāt with the goal of remotely monitoring amperage and voltage of pump stations in order to ensure better pump reliability while eliminating the costs associated with manual processes.

## **The Solution: Remote Pump Management Increases Reliability**

Elevāt worked collaboratively with the grower to deliver the cloud-based IoT monitoring system across the pump stations. Sensors were installed to measure water flow and monitor pump data remotely. After establishing a data connection, minimum and maximum power values were determined and condition alerts were created. Now the grower can monitor each pump remotely while Elevāt delivers notifications when these pumps are operating outside of the predetermined optimum range. Once successfully implemented, the grower was able to customize the Elevāt portal to track the data most important to their operations.



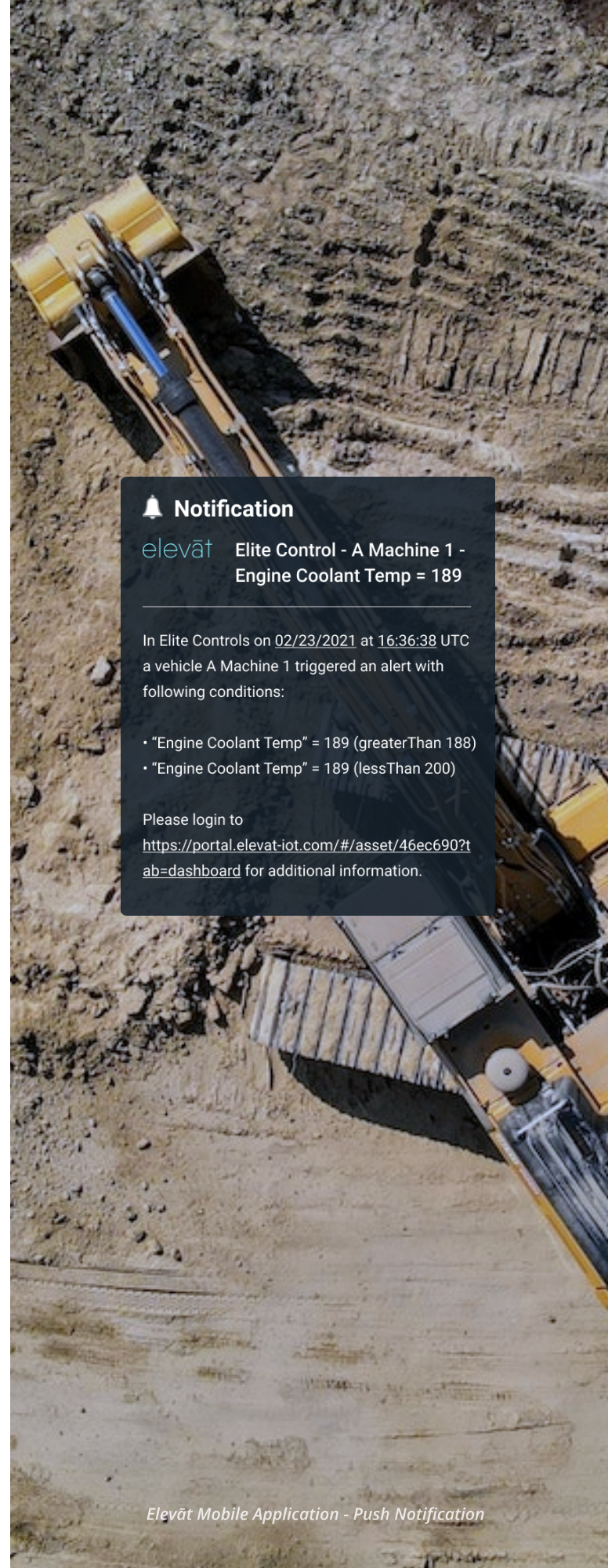


## The Results: Optimized Pump Station Operation

Elevāt delivered a solution that remotely manages, monitors, and optimizes pump station operation for better crop yields and product quality. Using the EZ or Machine Connect gateway platform, the grower checks the status of each pump on any device from anywhere in the world. This saves time and money by eliminating the need to visit each station on a daily or weekly basis. Amperage or voltage spikes can cause great damage to machines, but with pre-set condition alerts, these issues can be avoided. Machine maintenance now occurs the moment a pump indicates it is performing outside of its optimal range. By shifting to a digital solution, the grower was also able to visualize historical data for analysis purposes. Further, preemptive maintenance has improved uptime. Now, the grower is focused on optimizing pump economics to improve cost efficiency across their business.

 [www.appliedfluidpower.com](http://www.appliedfluidpower.com)

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### Notification

**elevāt** Elite Control - A Machine 1 -  
Engine Coolant Temp = 189

In Elite Controls on 02/23/2021 at 16:36:38 UTC  
a vehicle A Machine 1 triggered an alert with  
following conditions:

- "Engine Coolant Temp" = 189 (greaterThan 188)
- "Engine Coolant Temp" = 189 (lessThan 200)

Please login to

<https://portal.elevat-iot.com/#/asset/46ec690?t=ab=dashboard> for additional information.

*Elevāt Mobile Application - Push Notification*